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CLINICO - EPIDEMIOLOGICAL STUDY IN PATIENTS WITH NEUROCYSTICERCOSIS AT TERTIARY CARE HOSPITAL IN VIZIANAGARAM, ANDHRA PRADESH.

Neurology

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ABSTRACT

INTRODUCTION: Neurocysticercosis is the most common parasitic disease of Nervous system, with a prevalence of 50 million people worldwide, 50,000 deaths worldwide annually. Clinical manifestations of Neurocysticercosis are varied due to individual differences in the number, size, and topography of lesions and in the severity of the host's immune response to the parasites It is the major cause of young and adult onset epilepsy in tropical countries.

OBJECTIVES: To study the Demographic characteristics and Clinical profile of Neurocysticercosis.

MATERIALS AND METHOD: This is a Prospective Type of study in tertiary care centre for a duration of one year from August 2018 to july 2019 To study the Demographic characteristics, Clinical profile of Neurocysticercosis. Based on revised criteria for the diagnosis of Neurocystecercosis, cases were separated into Definitive Cases, and Probable Cases of Neurocysticercosis .Diagnostic criteria of neurocysticercosis was done based on Histological confirmation of parasite from biopsy of brain or spinal cord lesion .Cystic lesion showing the scolex on CT or MRI. Direct visualization of subretinal parasites on fundoscopy. Positive serum immunoelectrotransfer blot(EITB) for the detection of anticysticercal antibodies. Resolution of intracranial cystic lesions after therapy with albendazole. Spontaneous resolution of small single enhancing lesion. Clinical manifestations suggestive of NCC(Neurocysticercosis). Positive CSF enzyme linked immunosorbent assay (ELISA)

RESULTS: In the present study, Maximum number of patients encountered are in the age group of 21 to 30 yrs (31.11%), followed by 41-50 yrs(20.00%), and the mean age of cases was 32.8yrs. Of which 62% are male and 38% are female. 93%of cases have clinical presentation of seizures. The Most common site Of lesion on Ct is in parietal lobe 58%, 31% frontal lobe, 24% multiple lobes. Pattern of seizures is simple partial in 51% cases,29% gtcs 11%complex partial . No of lesion seen On imaging are single in 60% cases, multiple lesions in 40% cases. All the 45 patients are Non-vegetarians, and only 8 patients(17.77%) were pork eaters.

CONCLUSIONS: Neurocysticercosis is the most common parasitic infection of the brain. Most common clinical manifestation is Seizures Commonly presenting as Ring Enhancing lesion. All cases of young and adult onset Epilepsy in Tropical countries should be evaluated for Neurocysticercosis.

KEYWORDS

NCC, Neurocysticercosis

I. INTRODUCTION

Neurocysticercosis is the most common parasitic disease of Nervous system, with a prevalence of 50 million people worldwide.

Neurocysticercosis has been estimated to cause at least 50,000 deaths worldwide annually.

The geographic distribution of cysticercosis is wide, with high prevalence reported from Mexico, Central and South America, India and Sub-Saharan Africa.

Clinical manifestations of Neurocysticercosis are varied due to individual differences in the number, size, and topography of lesions and in the severity of the host's immune response to the parasites.

It is the major cause of young and adult onset epilepsy in tropical countries.

In India, Neurocysticercosis has been identified as a cause of 2-2.6% unselected cases of Seizures.

II. AIMS AND OBJECTIVES

To study the - Demographic characteristics and

- Clinical profile of Neurocysticercosis.

III. MATERIALS AND METHODS

TYPE OF STUDY : Prospective study.

PLACE OF STUDY :

Maharajah institute of medical sciences. (A Tertiary care hospital.)

DURATION OF STUDY : One year, from August 2018 to July 2019.

INCLUSION CRITERIA

The Diagnosis was based on Clinical and Radiological features .

Based on revised criteria for the diagnosis of Neurocystecercosis, cases were separated into

- Definitive Cases, and
- Probable Cases of Neurocysticercosis.

DIAGNOSTIC CRITERIA OF NEUROCYSTICERCOSIS

ABSOLUTE CRITERIA:

1. Histological confirmation of parasite from biopsy of brain or spinal cord lesion.
2. Cystic lesion showing the scolex on CT or MRI.
3. Direct visualization of subretinal parasites on fundoscopy.

MAJOR CRITERIA:

1. Lesions highly suggestive of NCC on CT or MRI (cyst without scolex,enhancing or calcified lesion)
2. Positive serum immunoelectrotransfer blot(EITB) for the detection of anticysticercal antibodies.
3. Resolution of intracranial cystic lesions after therapy with albendazole.
4. Spontaneous resolution of small single enhancing lesion

MINOR CRITERIA:

1. Lesions compatible with NCC on neuroimaging studies.
2. Clinical manifestations suggestive of NCC.
3. Positive CSF enzyme linked immunosorbent assay (ELISA)

EPIDEMIOLOGICAL CRITERIA :

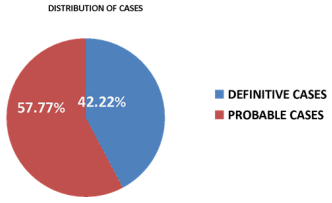
1. Evidence of household contact with Taenia solium infection.
2. Individuals coming from or living in an area where cysticercosis is endemic.
3. History of frequent travel to disease endemic areas.

EXCLUSION CRITERIA:

Patients with

- Tuberculosis,
- HIV reactive,
- Malignancy,
- known case of Neurocysticercosis on medication.

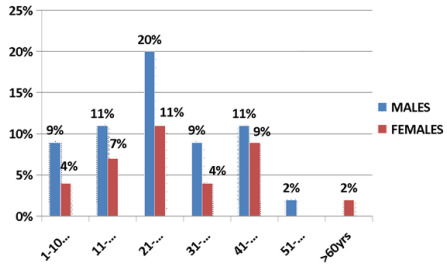
IV. RESULTS



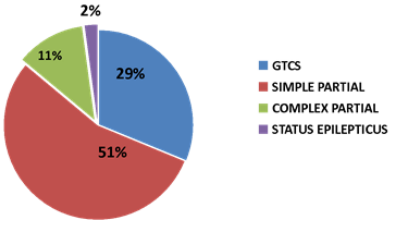
Clinical Presentation Of NCC

Clinical Presentation	Number	Percentage
Seizures	**42**	**93.33%**
Headache	08	17.77%
Raised ICT	03	06.66%
Mimicking Stroke	04	08.88%
Cranial Nerve Palsies	03	06.66%
Incoordination	04	08.88%
Dementia	04	08.88%

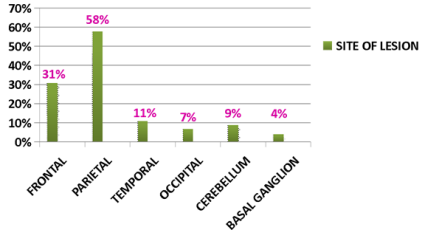
AGE AND SEX DISTRIBUTION OF CASES



SEIZURES PATTERN



DISTRIBUTION OF LESIONS ON CT



V. DISCUSSION

AGE:

In the present study, maximum number of patients(31.11%) is encountered in the age group of 21 to 30 yrs, followed by 41-50 yrs(20.00%),and the mean age of cases was 32.8yrs.

In Kuruvilla (2001) reported that the majority of the cases were in the age range of 24-62yrs, with a mean age of 35.2yrs.

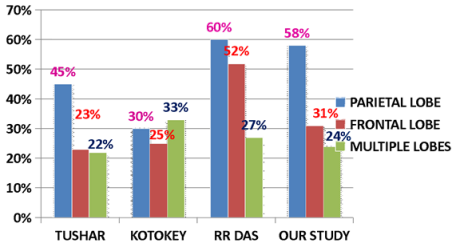
Tushar B Patil (2010) reported that the majority of the cases were in the age group of 21-30 yrs.

DIETARY HABITS :

All the 45 patients were Non-vegetarians, and only 8 patients(17.77%) were pork eaters.

In Kuruvilla's study also all patients were non-vegetarians, and 36% of them were pork eaters.

SITES OF LEISON ON CT



VI. CONCLUSION

Neurocysticercosis is the most common parasitic infection of the brain.

Most common clinical manifestation is Seizures

Commonly presenting as Ring Enhancing lesion as.

We recommend that all cases of young and adult onset Epilepsy in Tropical countries should be evaluated for Neurocysticercosis.

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